Chapter One
INVENTORY

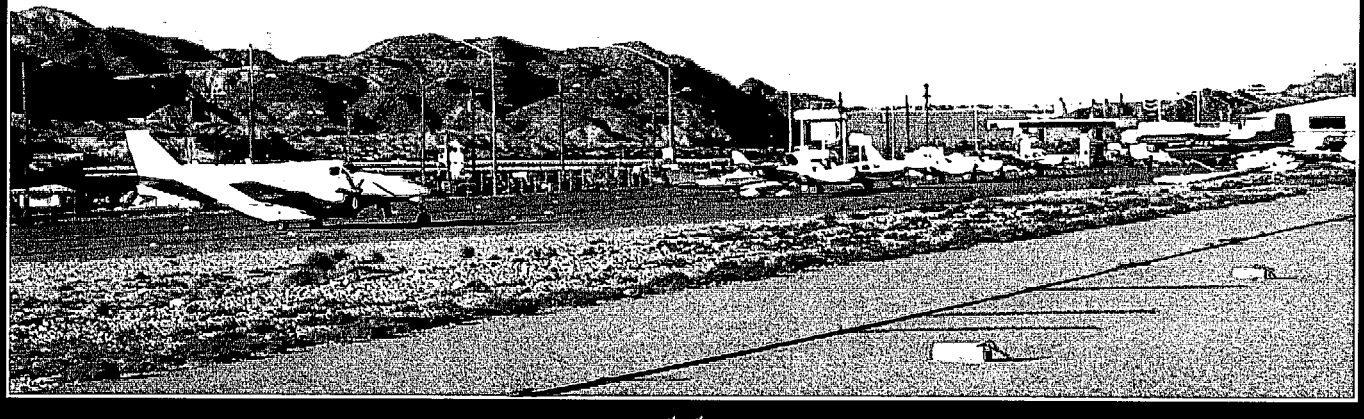
INVENTORY

The initial step in the preparation of an airport master plan update is the collection and analysis of information pertaining to the airport and the area the airport serves. This includes an inventory of existing airport facilities, area airspace, and air traffic control, as well as a historical accounting of airport activity. In addition, background information regarding the Laughlin/Bullhead City area is collected. This includes descriptions of the airport's regional setting, the local climate, surface transportation, community's socio-economic profile, as well as a review of area land uses and planning efforts that might affect this master plan update.

The information outlined in this chapter attempts to provide a foundation, or starting point, for all subsequent chapters. Therefore, it is essential to the success of this master plan update that a complete and accurate inventory is outlined. The findings and assumptions made in this plan are dependent on information collected concerning the airport and the area it serves. This information was obtained through on-site inspections of the airport, interviews with airport staff, airport tenants, and representatives of local planning and economic development agencies. Information was also obtained from available documents and studies concerning the airport, including the previous **Airport Master Plans** (1988 and 1994) and the **F.A.R. Part 150 Noise Compatibility Study** (1996).

AIRPORT SETTING

Laughlin/Bullhead International Airport is located on the Arizona side of the Colorado River, in the northern part of Bullhead City near the Laughlin Bridge and the intersection of Arizona Routes



68 and 95. As indicated on **Exhibit 1A**, the Lake Mead National Recreational Area, including Davis Dam and Lake Mohave, is located immediately north of the airport. Laughlin, Nevada, a gaming resort center, is located on the west side of the Colorado River.

The airport is situated on 650 acres within Sections 6 and 7 of Township 20 North, Range 21 West, and Sections 30 and 31 of Township 21 North and Range 21 West. The airport elevation is 692 feet above mean sea level (MSL).

Laughlin, Nevada and Bullhead City, Arizona are located at the intersection of Arizona Routes 68 and 95 and Nevada Highway 163, near the common boundary of the states of Arizona, Nevada, and California. Interstate 40 runs east-west approximately 15 miles south of the Laughlin/Bullhead City area.

Bullhead City and Laughlin are central to a number of tourist destinations, including the Colorado River which runs between the two communities. Las Vegas is approximately 90 miles to the north. Hoover Dam and Lake Mead are 80 miles north, while Lake Havasu is 68 miles south. Flagstaff and the Grand Canyon are located approximately 175 miles east and Phoenix is 215 miles southeast.

Bullhead City is located in the Colorado River Valley. The terrain varies from 504 feet near the river to 1,400 feet in the Black Mountains on the east corporate boundaries of the city. To the west, on the Nevada side of the river, are the Newberry Mountains. The Death Mountains are located to the southwest. Los Angeles is 288 miles west.

CLIMATE

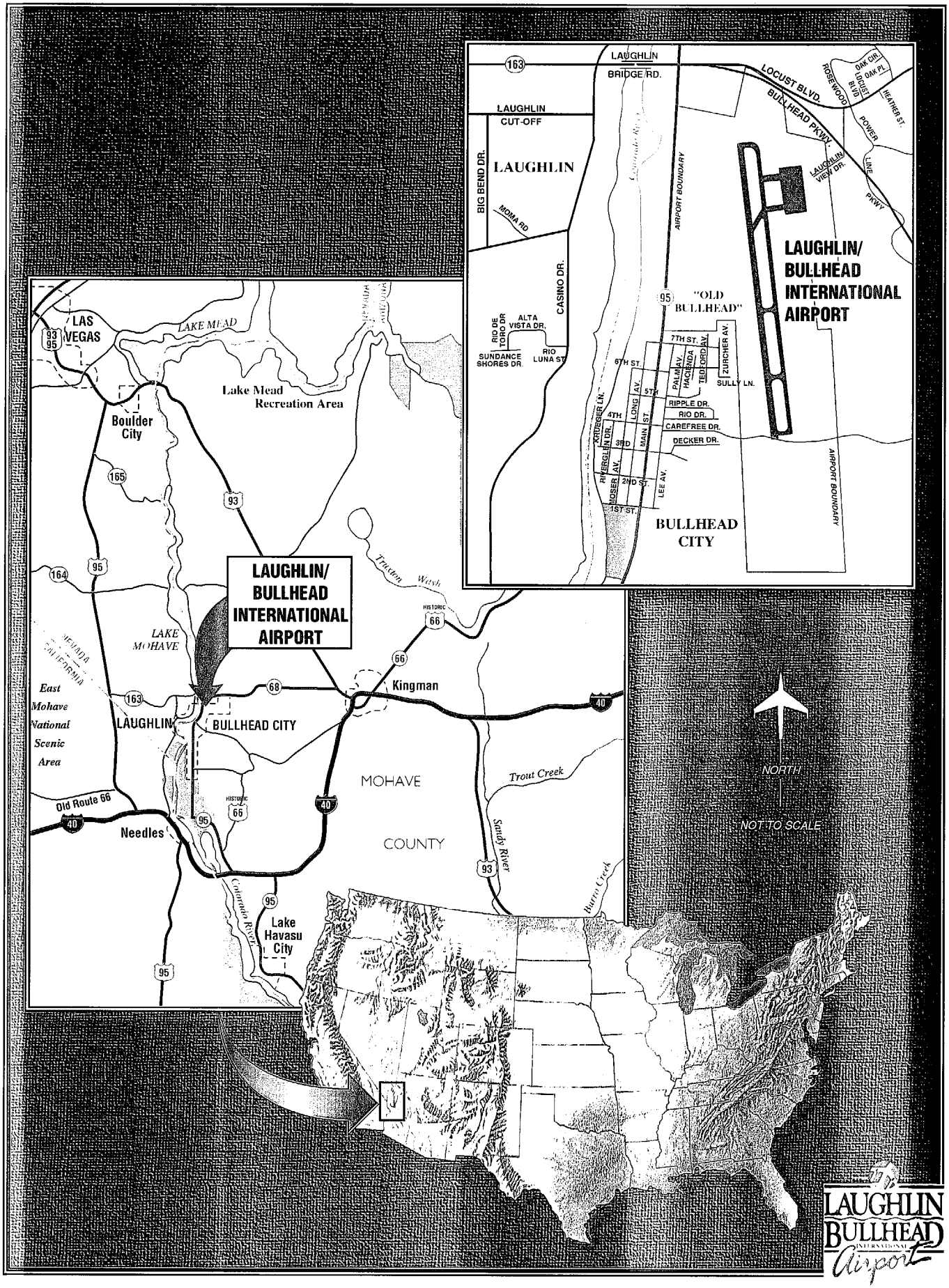
Weather conditions play an important role in the operational capabilities and capital development of an airport. Temperature is an important factor in determining runway length required for aircraft operation. Wind speed and direction determine operational flow characteristics. The percent of time visibility is impaired due to cloud coverage is a major factor in determining the use of instrument approach aids.

The desert climate in the Laughlin/ Bullhead City area is influenced by its low elevation and surrounding mountains. The average annual precipitation in the area is 4.19 inches. The year round average temperature is 85.4 degrees Fahrenheit.

Bullhead City has gained notoriety through national weather reports, by occasionally being recognized for the nation's highest temperature of the day. Average temperatures in mid-summer range from afternoon highs of 108 degrees to overnight lows of 79 degrees. The climate is much more mild in the winter when temperatures generally range from 41 to 62 degrees F.

Prevailing winds at Laughlin/Bullhead International Airport are either out of the north or south, and are generally aligned with the river valley. During the hotter months (May to October) winds are primarily out of the south.

98MP18-1A-10/4/00



LAUGHLIN BULLHEAD International Airport

Exhibit 1A
AIRPORT SETTING

Calm winds occur approximately 20 percent of the time.

Ceiling and visibilities at the airport are generally excellent year-round. Visual flight rule (VFR) conditions are in effect approximately 98 percent of the year.

AIRPORT HISTORY

In 1942, the United States Bureau of Reclamation initiated the construction of the Davis Dam Power Plant. In 1946, a runway was established on Bureau of Land Management (BLM) land approximately two and one-half miles south of the dam, at what is now the Laughlin/Bullhead International Airport, to provide a landing field for aircraft transporting equipment and personnel connected with the Davis Dam project.

In 1968, Mohave County leased the airport from the BLM for a 50-year period. In 1971, the County subleased a portion of the airport to Bullhead Airport, Inc., a private enterprise which provided fixed base operation (FBO) services. An airport improvement project was undertaken in 1972 to relocate the runway and provide drainage work, marking, lighting, and fencing.

In 1979, a new airport lease for the airport was negotiated by the County with the newly formed Mohave County Airport Authority, a nonprofit corporation. The sublease with Bullhead Airport, Inc. was renegotiated with the Authority in 1980. Bullhead Airport, Inc. continued to make further improvements to what is now the old airfield. In September 1991, Mohave County and Mohave County Airport Authority renegotiated an updated 25-year lease with a 25-year renewal option.

In 1983, the BLM transferred the airport property to the State of Arizona. In 1986, the Arizona State Land Department sold the property through public auction to Bullhead Airport, Inc. with a stipulation that the buyer dedicate 433 acres to Mohave County for airport use and that, within two years, they complete a flood control project for protection of the airport.

Between 1988 and 1991, new airside and landside facilities were planned and developed on the east side of the airport property. These included a new, longer runway and taxiways, commercial service terminal, apron, and automobile parking lot. In 1993 the runway and taxiways were widened. In 1994, the commercial service parking apron was expanded and a nonprecision instrument approach using the Needles VORTAC was instituted.

Table 1A summarizes the various state and federal development grants that Laughlin/Bullhead International Airport has received in the last ten years.

AIRPORT AUTHORITY

Laughlin/Bullhead International Airport is managed and operated by the Mohave County Airport Authority, Inc., a non-profit corporation. It is a volunteer organization composed of residents of Mohave County, Arizona and Clark County, Nevada.

TABLE 1A
Airport Development Grants
Laughlin/Bullhead International Airport

Year	Improvement	Grant Amount
FAA AIP Grants		
1988	Site prep/grading, relocation of powerline	$2,800,000
1989	Land acquisition (68.84 acres) for terminal site	$2,800,000
1990	Site prep/grading	$2,800,000
1991	Construct runway, lighting, fencing, ARFF vehicle and building	$3,913,171
1992	Runway overlay, rotating beacon	$2,396,100
1993	Air carrier apron extension, security fencing	$400,000
1993	Airport Master Plan Update	$111,080
1993	Runway widening to 150'	$2,196,354
1995	F.A.R. Part 150 Study	$150,000
1995	East FBO site property acquisition, site prep, apron construction	$947,149
1996	East FBO site property acquisition, site prep, apron construction	$383,697
1997	Eastside apron construction	$561,621
1997	Acquire 47-7 acres (south)	$2,000,000
1998	Eastside Apron Construction and Master Plan Update	$689,364
1999	Land Acquisition and Construction (Eastside)	$363,664
ADOT Grants		
1989	Relocate coal slurry line, power line	$423,000
1989	Coal slurry line engineering	$315,000
1990	Financial feasibility study, old taxiway design and overlay, terminal	$432,000
1991	Terminal site prep	$475,000
1994	Waterline extension, emergency generator, aerial photogrammetry	$500,000
1996	Acquisition of property, grading & paving	$500,000
1996	Acquisition of property, grading & paving	$650,000
1997	Planning and Land Acquisition (Eastside)	$940,950
1998	Land Acquisition (South)	$98,177
1998	Land Acquisition (Eastside)	$940,950
1998	Control Tower Construction	$750,000
1998	Consultation, Purchase, Transport, and Reconstruct Tower Cab	$250,000
1999	Design and Construction (Eastside)	$338,400

Membership requires two-thirds approval by the existing voting membership at the annual meeting.

The Authority membership also elects its Board of Directors. The eleven-member Board of Directors serve staggered three year terms. The majority of six members rotates annually between the two counties. During odd-numbered years six members must be from Mohave County and during even-numbered years six members must be from Clark County.

The Authority's Executive Director and Chief Operating Officer oversees the day-to-day business operations of the Airport Authority, inclusive of the airport and a staff of 60 employees.

AIR TRAFFIC ACTIVITY

Laughlin/Bullhead International Airport serves both commercial service and general aviation activity. Military activity is minimal. Commercial service activity is typically quantified by the number of aircraft boardings, or enplanements, and the number of takeoffs and landings, or operations. General aviation activity is quantified by operations and the number of aircraft based at the airport. **Table 1B** outlines these indicators of aviation activity at Laughlin/Bullhead International Airport over the last two decades.

As of March, 1999, there was one commuter airline providing scheduled passenger service at Laughlin/Bullhead International Airport. America West Express, operated by Mesa Airlines, offers four daily flights to the America West hub in Phoenix on 19-seat Beech 1900 aircraft.

In addition, two charter airlines offer flights on a frequent basis. Sun Country operates charters to and from Minneapolis twice a week on Boeing 727 aircraft. Sierra Pacific operates charter flights to and from various destinations for Sun West International. Sierra Pacific operates Boeing 737-200 aircraft, and flights average approximately 26 to 28 per month.

The based aircraft at Laughlin/ Bullhead International Airport are listed by N-number, model, and type in **Appendix A**. The 60 based aircraft include 42 single engine piston aircraft, 12 multi-engine piston aircraft, three turboprop aircraft, one business jet, and two helicopters.

Over the past five years, military activity has averaged less than 500 operations annually. In 1998, the tower count totaled 234. Military operations are primarily helicopter, with an occasional C-12 aircraft.

AIRPORT FACILITIES

The facilities at an airport can be divided into two basic areas. The airfield includes facilities directly related with the movement of aircraft. This includes runways, taxiways, lighting, and navigational aids.

Landside (terminal area) facilities are made up of the passenger and general aviation terminal area as well as airport support facilities. **Exhibit 1B** depicts the existing facilities and the following subsections describe the existing airfield, passenger and general aviation terminals, and support facilities at Laughlin/Bullhead International Airport.

TABLE 1B
Historical Aviation Data
Laughlin/Bullhead International Airport

		Operations[2]		
Year	**Based Aircraft[1]**	**General Aviation**	**Commercial**	**Enplanements[3]**
1980	48	18,500	none	none
1981	68	21,000	none	none
1982	76	25,000	2,000	773
1983	78	40,000	2,000	2,695
1984	82	50,000	N/A	5,667
1985	87	62,500	2,900	2,778
1986	86	66,800	5,466	6,213
1987	76	N/A	12,204	33,819
1988	75	N/A	N/A	29,969
1989	87	48,960	19,040	47,830
1990	101	33,950	14,842	45,923
1991	101	39,322	10,878	35,921
1992	76	40,004	9,696	38,068
1993	73	36,336	11,624	97,095
1994	41	33,643	8,332	74,194
1995	45	42,750	12,603	118,484
1996	101	34,770	13,077	116,907
1997	60	34,880	7,826	64,094
1998	60	40,514	5,663	30,387

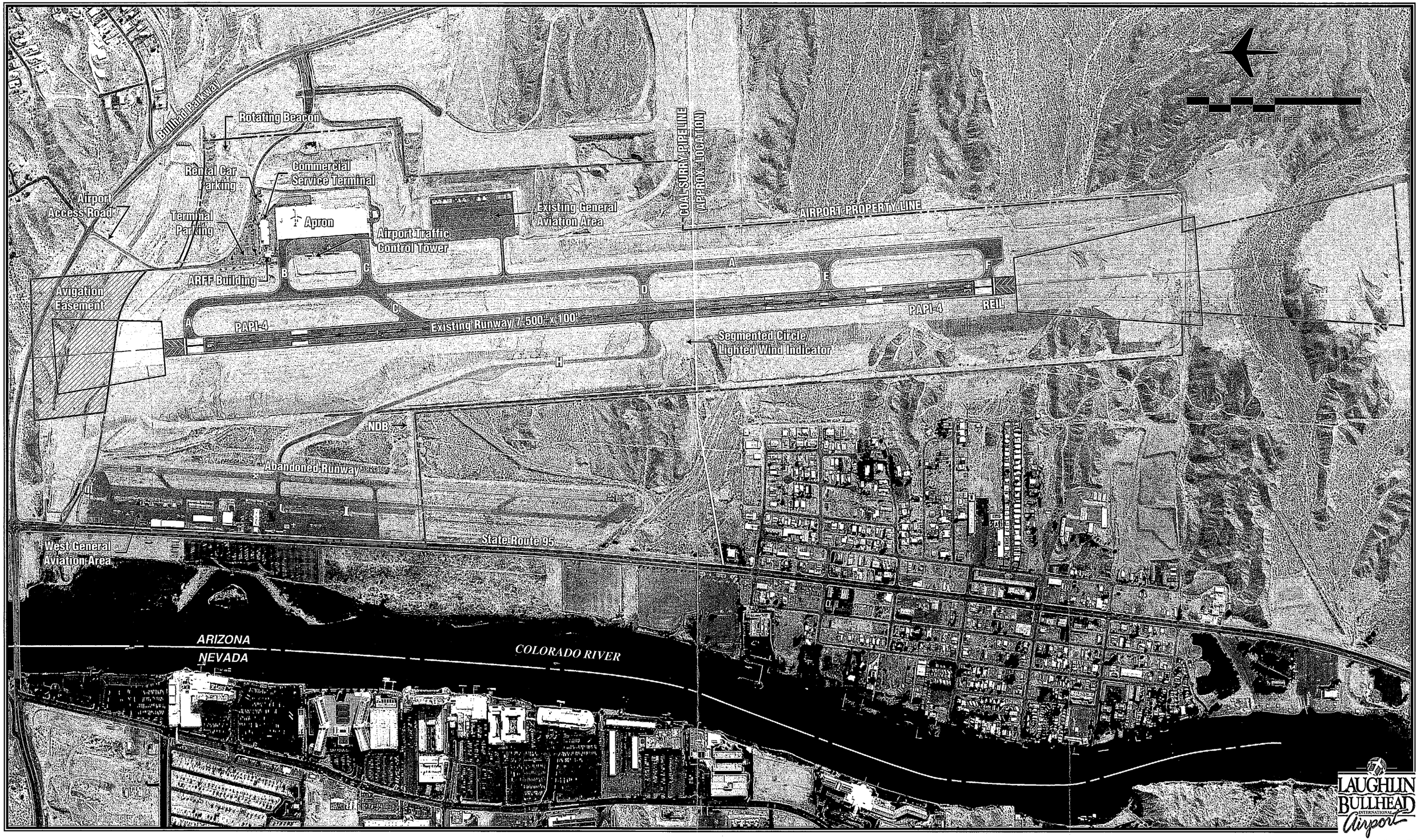
Sources:
1 Based aircraft data were obtained from FAA Form 5010 and Airport Records.
2 Operations were obtained from FAA Form 5010, FAA Terminal Area Forecasts, FAA Airport Activity Statistics, Airport Air Traffic Control Tower, and Airport Records.
3 Enplanement data was obtained from FAA Airport Activity Statistics, Washington, D.C., and Airport Records.

AIRFIELD FACILITIES

Runway and Taxiways

The Laughlin/Bullhead International Airport has a single active runway: Runway 16-34 is 7,500 feet long and 150 feet wide. There are 200-foot long paved overruns off each end. The asphalt runway is strength-rated at 75,000 pounds single wheel loading (SWL), 200,000 pounds dual wheel

98MP18-1B-225/99



LAUGHLIN BULLHEAD INTERNATIONAL Airport

Exhibit 1B
AIRPORT FACILITIES

loading (DWL), and 400,000 pounds for dual tandem loading (DTL). **Table 1C** summarizes the runway data.

The airport is also served by a system of taxiways that facilitate aircraft ground movements. Each taxiway is designated by a letter of the alphabet. **Exhibit 1B** identifies each taxiway by its letter designation. Taxiway A is a full length parallel taxiway on the east side of Runway 16-34. This taxiway is 75 feet wide and begins at the threshold of Runway 16. The taxiway then extends east for four hundred feet where it tuns to run parallel for the entire length of the runway. At the south end of the runway it connects with Taxiway F which extends west to the Runway 34 threshold. There is also a holding apron on the south side of Taxiway F.

TABLE 1C
Runway Data
Bullhead Laughlin International Airport

	Runway 16-34	
Length (ft.)	7,500	
Width (ft.)	150	
Pavement Material	Asphalt	
Load Bearing Capacity		
SWL (lbs.)	75,000	
DWL (lbs.)	200,000	
DTL (lbs.)	400,000	
Runway Lighting	MIRL	
Runway Marking	Nonprecision	Precision
Approach Lighting	REIL	REIL
	PAPI-4	PAPI-4
Navigational Aids	None	VOR/DME
		GPS

There are three midfield exit taxiways between the runway and parallel taxiway. Taxiway C is an angled exit located approximately 5,300 feet from the Runway 34 threshold. Taxiways D and E are right-angled exits located approximately 3,200 feet and 1,500 feet respectively from the Runway 34 threshold. All three of the exit taxiways are 75 feet wide.

Taxiway C extends across the parallel taxiway to connect with the commercial service ramp. This ramp can also be accessed from Taxiway A via Taxiway B. Both connecting taxiways are 75 feet wide. There is presently one other connecting taxiway on the east side of the airport. Taxiway G connects the east side general aviation ramp with Taxiway A. This taxiway is 35 feet wide and is designed for general aviation aircraft.

Taxiway H connects the west side general aviation facilities to the airfield system. Taxiway H is thirty-five feet wide and is designed to transition the

elevation difference between Runway 16-34 and the west general aviation area. There are three aircraft turnouts located along the taxiway to permit two way traffic to pass.

Lighting and Marking

The location and presence of an airport at night is universally indicated by an airport rotating beacon. The rotating beacon at Laughlin/Bullhead International Airport is located on a hill in the northeast corner of the airport property. A lighted windsock and a segmented circle are located near midfield west of the runway and just south of Taxiway H. The wind sock/segmented circle provide pilots with a visual indication of surface winds as well as the airport traffic pattern.

Runway 16-34 is equipped with medium intensity runway edge lighting (MIRL) as well as threshold lighting at each runway end. Parallel Taxiway A and all connecting taxiways are equipped with medium intensity taxiway lighting (MITL).

The runway is also equipped with runway end identifier lights (REIL) on both ends. REIL's provide approaching pilots with positive identification of the approach end of the runway. Both runway approaches are served by four-box precision approach path indicators (PAPI-4). PAPI's are a system of colored lights designed to provide visual descent guidance during a runway approach.

Besides runway edge and centerline markings, other markings vary for each approach. Runway 34 is painted with precision markings including the runway numbers, threshold bars, aiming point, and touchdown zone markings. Runway 16 has nonprecision markings including runway numbers, threshold bars, and aiming point markings. Taxiways on the airport are marked with centerline and edge markings.

Installation of runway/taxiway signage is an essential component of a surface movement guidance control system necessary for the safe and efficient operation of an airport. The airport also has a runway/taxiway signage system as required by the **Code of Federal Regulations (CFR) 14, Part 139**, which governs the operation of land airports serving DOT certificated air carrier activities.

The signage system installed at Laughlin/Bullhead International Airport includes runway and taxiway designations, holding positions, routing/directional, runway end and exits, and runway distance remaining signs.

Navigational Aids

Navigational aids are electronic devices that transmit radio frequencies which properly equipped aircraft and pilots translate into point-to-point guidance and position information. Ground-based electronic navigational aids that are located on or near Laughlin/Bullhead International Airport are used for enroute and terminal area navigation as well as landing aids.

Locational aids operating near the airport are for the purpose of enroute navigation. Enroute navaids often serve navigation to more than just one area airport as well as aircraft simply traversing the area. The types of enroute electronic navigational aids available for aircraft flying to or from Laughlin/Bullhead International Airport include the very high frequency omnidirectional range (VOR) facilities and the global positioning system (GPS).

The VOR provides azimuth readings to pilots of properly equipped aircraft by transmitting a radio signal at every degree to provide 360 individual navigational courses. Frequently, distance measuring equipment (DME) is combined with a VOR facility to provide distance as well as direction information to the pilot. In addition, military tactical air navigation aids (TACAN's) and civil VOR's are commonly combined to form a VORTAC. A VORTAC provides distance and direction information to civil and military pilots.

The Needles VORTAC operates on a frequency of 115.2 KHz and Channel 99. It is located approximately 23.2 nautical miles southeast of the Laughlin/Bullhead International Airport. The beacon transmits a continuous three-letter identifier code, "EED", using International Morse Code. This navigational aid incorporates the VOR and distance-measuring equipment (DME) to function as a single channelized VHF/UHF system. Operating in conjunction with the ground station, a properly equipped aircraft is able to translate the VORTAC signals into a visual display of both azimuth and distance.

There are two other VOR facilities in the vicinity. The Goffs VORTAC is located 30 nautical miles west of the airport, and operates on a frequency of 114.4 and Channel 91. The Kingman VOR is located 31 miles east-northeast and operates on a frequency of 108.8 and Channel 25.

GPS is an additional navigational aid for pilots enroute to the airport. GPS was initially developed by the United States Department of Defense for military navigation around the world. Increasingly, over the last few years, GPS has been utilized more in civilian aircraft. GPS uses satellites placed in orbit around the globe to transmit electronic signals which properly equipped aircraft use to determine altitude, speed, and navigational information through triangulation of three separate satellite signals. GPS permits pilots to navigate directly to any airport in the country without using a specific ground-based navigational facility.

The Needles VORTAC is also utilized for published VOR/DME non-precision approach to Runway 34 at Laughlin/ Bullhead International Airport. The nonprecision approach provides the airport with weather minimums of 1,708 foot cloud ceilings and 2.5 miles visibility. Runway 34 also has a published GPS approach with minimums of 1,208 feet above ground level (AGL) and 1.25 miles.

PASSENGER TERMINAL COMPLEX

The passenger terminal complex is located in the northeast corner of Laughlin/Bullhead International Airport. **Exhibit 1C** depicts the passenger terminal complex along with other landside facilities on the east side of the airport. The terminal facilities involve the major functions of the passenger terminal system: access, processing, and flight. The complex is comprised of several different components. These components can be categorized as follows:

- Terminal Access Roadways
- Vehicle Parking
- Passenger Terminal Building
- Terminal Apron

Terminal Access Roadways

The primary entrance to the passenger terminal area is off Bullhead Parkway, a major four-lane arterial, that runs along the north and east sides of the airport. Bullhead Parkway intersects with State Route 95 and Highway 68, and terminates just west of this intersection at the Laughlin Bridge. The roadway becomes Nevada Highway 163 in Laughlin.

There are two entrances from Bullhead Parkway into the terminal area. The north entrance is begins as two lanes in two-direction flow that runs south from Bullhead Parkway to the terminal loop road. As the road approaches the terminal, it changes into a one-way terminal road. The roadway widens to three lanes as it runs south along the west side of the parking lot. One lane enters the parking lot and the other two lanes turn east to run in front of the terminal building. There pavement widens directly in front of the terminal to provide for unloading zones on each side of the roadway. Near the east end of the terminal building the loop road turns north and narrows back to two lanes through lanes. At this point the terminal road intersects with the two lane entrance roadway from the east.

The east entrance road enters off Bullhead Parkway through the Bullhead Airpark. At the intersection with the terminal road, the west bound lane continues as a one way roadway to provide a return back to the terminal and the north entrance road. This essentially completes a loop road system around the terminal parking lot.

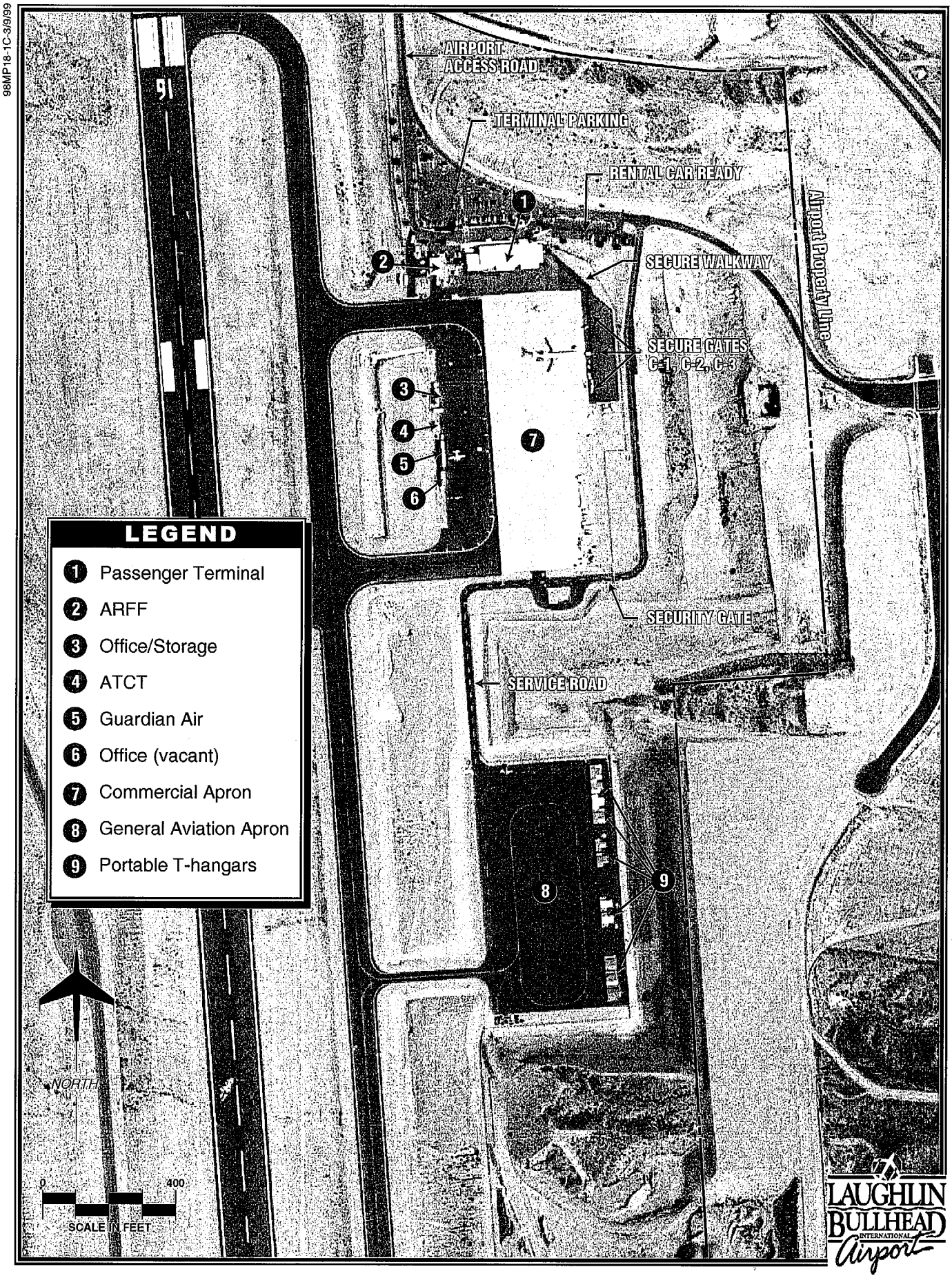
Vehicle Parking

Vehicle parking for the passenger terminal complex includes public, employee, and rental car space. There are 141 spaces available in the public lot. Employees currently park in the public parking lot. A total of 42 ready/return spaces for rental cars.

Passenger Terminal Building

The current passenger terminal at Laughlin/Bullhead International Airport was completed and put into service in February, 1992. As depicted on **Exhibit 1D,** the 10,500 square foot terminal building provides for airline ticketing, security checkpoint, boarding, baggage claim, restaurant, gift shop,

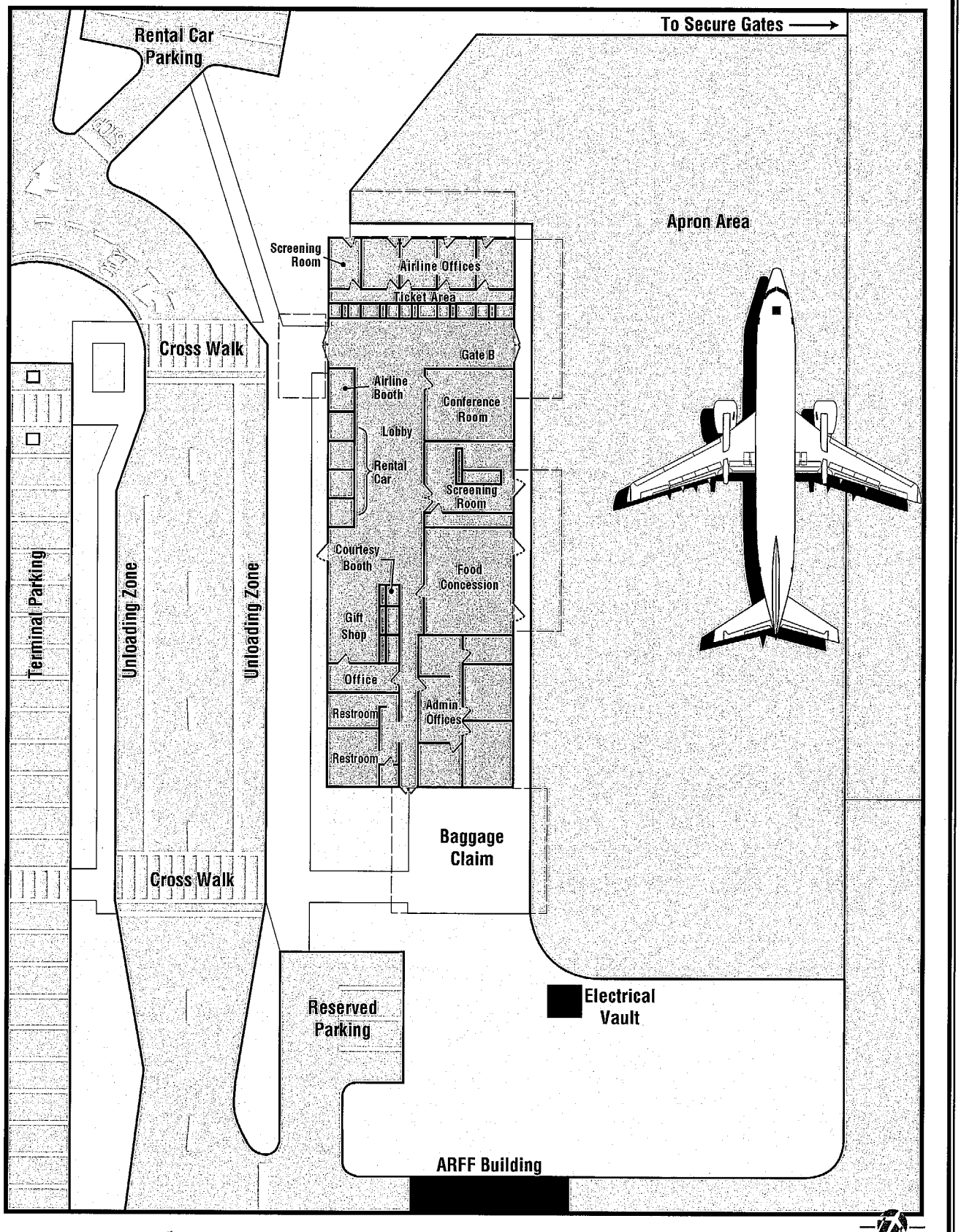
98MP18-1C-3/9/99



LAUGHLIN BULLHEAD INTERNATIONAL Airport

Exhibit 1C
EAST LANDSIDE FACILITIES

98MP18-1D-2/25/99



LAUGHLIN BULLHEAD INTERNATIONAL Airport

Exhibit 1D
TERMINAL AREA AND
FLOOR PLAN

and rental cars. Airport administration offices are also located in the terminal building.

Departing passengers enter the terminal building from the curbside. Ticketing and bag checking takes place along the eastern wall of the terminal. There are four ticket counters and offices in this area. A smaller airline booth is available on the north wall of the building. The airline departure gates are located at two separate locations in the building. One is located on the south wall near the middle of the terminal. The other is located along the east wall in the northeast corner of the building. The east side departure area includes a secured walkway along the north and east edge of the apron to three separate gates identified as C1, C2, and C3. Both gates are supported by separate security check points. An arrival gate is located on the south wall adjacent to the ticketing area. A common lobby serves for waiting and queuing.

A covered, open-air baggage claim is located outdoors on the west end of the terminal building. A linear bag drop serves as the bag claim device.

There are four rental car counters on the north wall of the terminal building. Two are occupied by Hertz and Avis rental cars. There are three smaller courtesy booths available next to the gift shop area. The food concession area is located in the middle of the terminal with a view of the aircraft apron. There is also a set of vending machines just outside the food concession area. The rest rooms are located in the northwest corner of the terminal building.

Terminal Apron

The passenger terminal apron currently encompasses approximately 26,800 square yards of pavement adjacent to the terminal building. The apron provides for aircraft parking, access, and circulation for both commuter turboprops and commercial jets.

GENERAL AVIATION COMPLEX

In addition to commercial aviation facilities, general aviation (GA) facilities play a primary role in the overall activity at Laughlin/Bullhead International Airport. It is general aviation that comprises the largest share of aircraft operations at the airport and offers air access to the most destinations.

The west side general aviation area is the original terminal area of the airport. It is accessible from State Route 95. While a transition has begun to move general aviation to the east side, the west side is still the location for most general aviation activity and all general aviation services on the airport. The Mohave County Airport Authority runs the fuel concession and line services. Sheble Aviation offers a flight school and flight training. **Exhibit 1E** depicts the west general aviation terminal area.

The other GA area is east of Runway 16-34. As depicted on **Exhibit 1C**, the east general aviation area is located south of the passenger terminal apron and presently includes aircraft parking apron and storage hangars. The east GA facilities are presently accessible

only through a security gate then via an airport service road. The previous Master Plan called for the transition of general aviation to the east side of the airfield. This existing development on the east side was constructed as the first phase of the plan. The following subsections discuss the general aviation facilities available.

General Aviation Terminal Building

The general aviation terminal building is located on the north end of the transient ramp in the west general aviation area. The GA terminal is readily accessible from State Route 95. The 9,000 square foot building includes a lobby/lounge, restrooms, the Airport Authority's fueling and line services, Sheble Aviation offices, and a rental car counter operated by Enterprise Rent-A-Car. The terminal building once served as the passenger terminal prior to the development of the current runway and east side terminal.

In addition, there is a convenience store and filling station on the west end of the building that is also operated by the Airport Authority.

There are 58 vehicle parking spaces surrounding the general aviation terminal. Eight spaces are dedicated to the rental car agency. There is also a covered rental car service stall at the northeast corner of the building.

Aircraft Parking Apron

General aviation aircraft parking is available in three general areas of the airport. On the east side there is an apron area comprised of approximately 29,200 square yards of pavement that fronts a row of hangars. There are 25 tiedowns on this ramp.

The main ramp in the west side general aviation area is located at the south end of the facilities. This ramp covers 24,200 square yards and is used primarily for transient parking. The former parallel taxiway for the abandon runway is also be used for aircraft parking when needed.

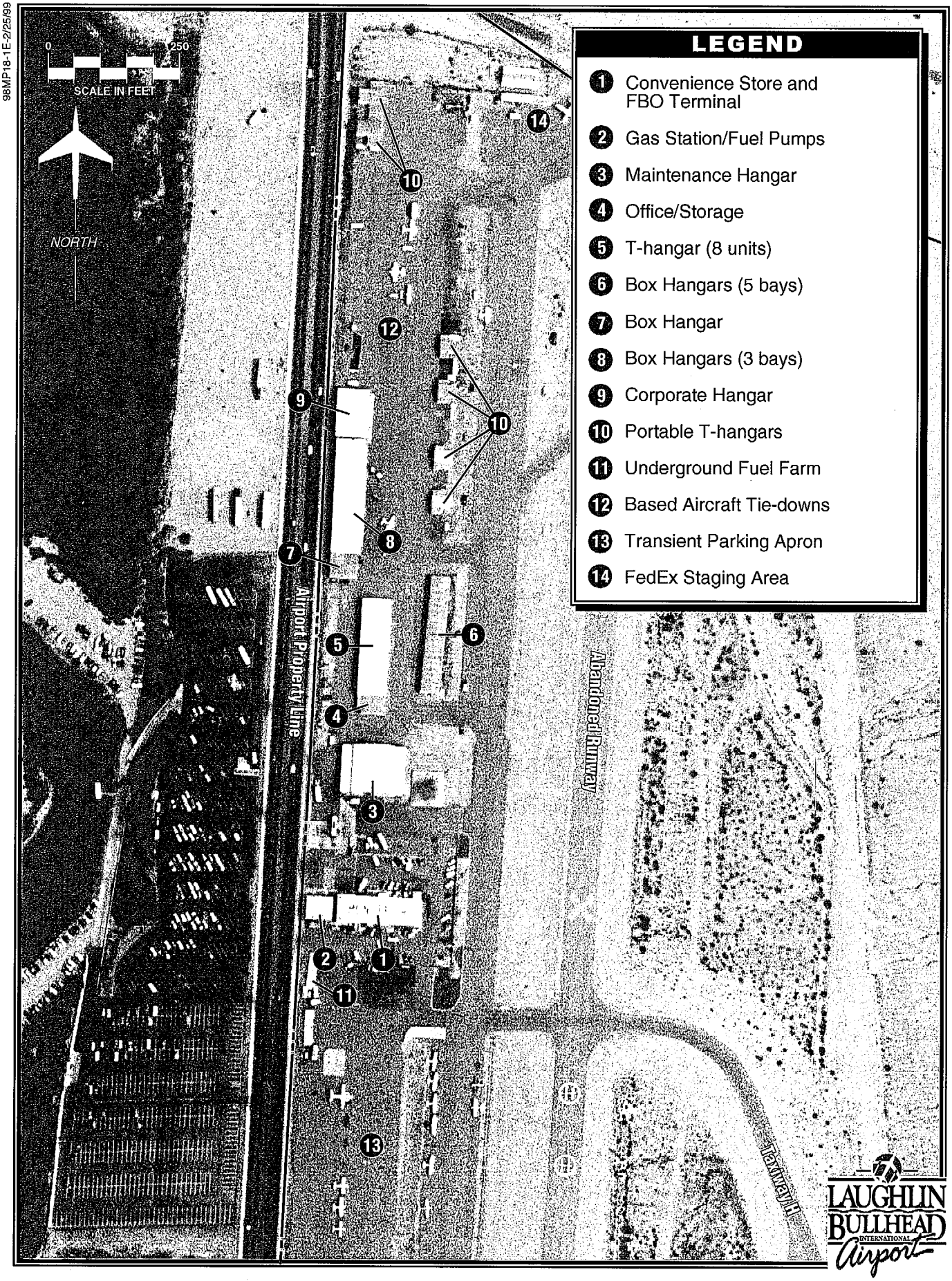
Based aircraft tiedowns are located near the north end or the west general aviation area. Approximately 8,300 square yards of pavement are available in this area. The former parallel taxiway also is used for parking in this area when needed.

FedEx uses an area at the north end of the west GA area for parking a commuter cargo plane (Cessna Caravan). Overnight air cargo is also transferred to and from the aircraft at this location.

Hangars

As with the parking apron, hangar areas are available on both sides of the airport. On the east side there are eleven portable hangars in a hangar row on the east side of the general aviation ramp. This row is subdivided into 16 leaseable spaces. Two of the existing hangars are owned by the Airport Authority and leased to tenants. The other nine are owned by the tenants who have land leases with the Airport Authority. Most of these hangars were relocated from the west general aviation area.

98MP18-1E-2/25/99



LAUGHLIN BULLHEAD INTERNATIONAL Airport

Exhibit 1E
WEST LANDSIDE FACILITIES

On the west side the available hangars are located in the north half of the terminal area. There is one large maintenance hangar located just north of the terminal building. This facility includes 6,643 square feet of hangar space as well as 3,913 square feet of office and storage space in two lean-tos on the east and west sides of the hangar. At the present time, the hangar is utilized by the Airport Authority for vehicle maintenance.

Immediately north of the maintenance hangar is an eight-unit nested T-hangar. The T-hangar has an office space and storage area attached. To the east of the nested T-hangar are five rectangular box hangars. Continuing to the north, are five portable T-hangars. There are five larger conventional hangars located along the west property line, north of the nested T-hangars. Finally, two additional portable T-hangars are located in the northwest corner of the west general area.

Fueling Facilities

Aviation fuel is presently stored underground in tanks that are in compliance with the current federal and state environmental regulations. The fuel farm is located south of the FBO terminal/gas station and next to the parking apron. There is one 15,000 gallon tank for avgas. Jet A is stored in two tanks, one 15,000 and one 12,000 gallon tank. The Airport Authority uses fuel trucks to dispense fuel to aircraft. There are two 750 gallon trucks for avgas and two 2,200 gallon trucks for Jet A. The airport utilizes 11 employees in the operation of the fuel concession. Normal operating hours for fuel services are 6:00 a.m. to 6:00 p.m. Fuel services are available on call from 6:00 p.m. to midnight.

Auto fuel sales associated with the convenience store utilize four underground tanks located beneath the fuel pumps on the street side of the building. These storage tanks are also fully compliant with environmental regulations. There are two 15,000 and three 12,000 gallon tanks. One of each stores unleaded regular. The other 15,000 gallon tank stores a mid-grade gasoline, and the other two 12,000 gallon tanks store premium grade fuel and diesel fuel.

SUPPORT FACILITIES

Airport Traffic Control Tower

The airport traffic control tower (ATCT) is located just to the west of the commercial service parking apron, between the apron and the runway. The ATCT is accessible only by crossing the secure parking ramp. The tower consists of a temporary single-story cab and office. The tower has been operated by Midwest Air Traffic Control under contract with the Airport Authority. On April 1, 1999, the tower became an FAA contract tower. The hours of operation are from 8:00 a.m. to 6:00 p.m.

Airport Rescue and Firefighting

The airport rescue and firefighting (ARFF) facility is located to the west of the terminal building. The includes two drive-through bays with doors on both

the sterile and non-sterile sides of the building. The ARFF is equipped with three vehicles including a 1976 Oshkosh PA-4, a 1992 Oshkosh TA-1500, and a one ton 1984 GMC quick response vehicle. The ARFF is manned by Airport Authority employees. There are normally eight to ten Authority employees who are trained and certified in airport rescue and firefighting.

Utilities

The availability of utilities is important in the consideration of airport development opportunities. Laughlin/ Bullhead International Airport is served by the following utilities:

Potable Water - Water is supplied by the North Mohave Water Company. The commercial terminal has a water flow capacity of 975 gallons per minute (gpm).

Sanitary Sewer - The airport is served by the Bullhead Sanitary District (BSD). BSD is a private, nonprofit utility servicing north Bullhead City.

Electric Power - Mohave Electric Cooperative, Inc. supplies electrical service to the airport. The airport also has an emergency generator located next to the passenger terminal building.

Natural Gas - Southwest Gas provides natural gas service to the east side of the airport. There is currently no natural gas service on the west side of the airport.

Telephone - Citizen Telcom provides telephone service to the airport.

Other Facilities

There are additional on-airport facilities located near the ATCT, next to the commercial parking apron, as indicated on **Exhibit 1C.** There are three temporary buildings in this area used for office and storage. The northernmost building is used as office and storage space by the Airport Authority. The building just south of the ATCT is used by Guardian Air, an air ambulance service. The southernmost building is currently unoccupied.

AIRSPACE AND AIR TRAFFIC CONTROL

The FAA Act of 1958 established the FAA as the responsible agency for control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS is defined as the common network of U.S. airspace, including air navigation facilities; airports and landing areas; aeronautical charts; associated rules, regulations, and procedures; technical information; personnel and material. System components shared jointly with the military are also included.

AIRSPACE STRUCTURE

To ensure a safe and efficient airspace system for all aspects of aviation, the FAA has established and airspace

structure that regulates and establishes procedures for aircraft using the NAS. The U.S. airspace structure provides for categories of airspace and identifies them as Classes A, B, C, D, E, and G. These are depicted on **Exhibit 1F** and described below.

Class A airspace includes all airspace from 18,000 feet MSL to Flight Level 600 (approximately 60,000 feet MSL). Class B airspace is controlled airspace surrounding high activity commercial service airports (i.e. Phoenix Sky Harbor International Airport). Class C airspace is controlled airspace surrounding lower activity commercial service airports and some military airports. Class D airspace is controlled airspace surrounding other airports with an air traffic control tower.

All aircraft operating within Class A, B, C, and D airspace must be in contact with the air traffic control facility responsible for the particular airspace. Class E airspace is controlled airspace that encompasses all instrument approach procedures and low altitude federal airways. Only aircraft conducting instrument flights are required to be in contact with air traffic control when operating in Class E airspace. Class G airspace is uncontrolled airspace. The airspace in the vicinity of Laughlin/Bullhead International Airport is depicted on **Exhibit 1G**.

Laughlin/Bullhead International Airport is located under Class D airspace. The Class D airspace is limited to the east side of the airport on a radius of four nautical miles, and from the surface up to 2,500 feet MSL. In addition, Class E airspace (from the surface to Class A) extends around the airport for a radius of six nautical miles. The Class E airspace also extends southward along the nonprecision approach to Runway 34 for a distance of nine nautical miles from the runway threshold.

For aircraft enroute or departing the Tucson area, there area several Victor airways available. Victor airways are corridors of airspace eight miles wide that extend upward from 3,000 feet above the ground and extend upward to 18,000 feet MSL. The airways run between VOR navigational aids. The Needles and Goff VORTAC's and the Kingman VOR are the converging point for Victor airways in the Tucson area.

There are also several Military Operations Areas (MOA's) and restricted areas south of the Laughlin/Bullhead City area. MOA's are established to separate military training activities from IFR traffic. Whenever an MOA is being used, non-participating IFR traffic may be cleared through the MOA if IFR separation can be provided by air traffic control. Pilots operating VFR should exercise extreme caution while flying within an active MOA. The closest MOA to Laughlin/Bullhead International Airport is the Turtle MOA located 28 nautical miles south of the airport.

In addition, there are several national recreation and wilderness areas and wildlife refuges in the tri-state area. These include the Lake Mead National Recreation Area located immediately north of Laughlin/Bullhead International Airport, Mount Tipton

Wilderness Area to the northeast, Mount Nutt Wilderness Area to the east, Warm Springs and Wabayuma Wilderness areas to the southeast, and Havasu Lake National Wildlife Refuge to the south. Aircraft are requested to maintain an altitude of at least 2,000 feet AGL over these areas.

During the environmental approval process for the construction of the existing runway, the Department of the Interior, the National Park Service, and the FAA adopted the following agreement with regards to overflights of the Lake Mead Recreation Area that is located immediately north of the airport:

"For mitigation on Lake Mead National Recreation Area: Aircraft departures to the north from Runway 16R-34L under visual flight rule (VFR) conditions will climb straight out for 2 nautical miles and then turn to the west and south, exiting the recreation area. Airport departures to the north from Runway 16R-34L under instrument meteorological conditions (IMC) will climb straight out for 2 nautical miles and then turn to the east, exiting the park. Aircraft landing from the north to the south on Runway 16R-34L will approach the airport generally from the east and will turn on to the final straight-in segment at a point ranging from 1 to 2 nautical miles north of Runway 16R-34L. When wind and weather conditions do not require approach and departure procedures north of the airport, a preferential runway use program will provide for departures to the south and arrivals from the south. Notice to airmen will publicize this preferential runway use procedure. Pilots operating VFR over parkland will be advised to fly not less than 2,000 feet above the surface, in accordance with the Interagency Agreement between the FAA and the National Park Service and with FAA Advisory Circular 91-36C."

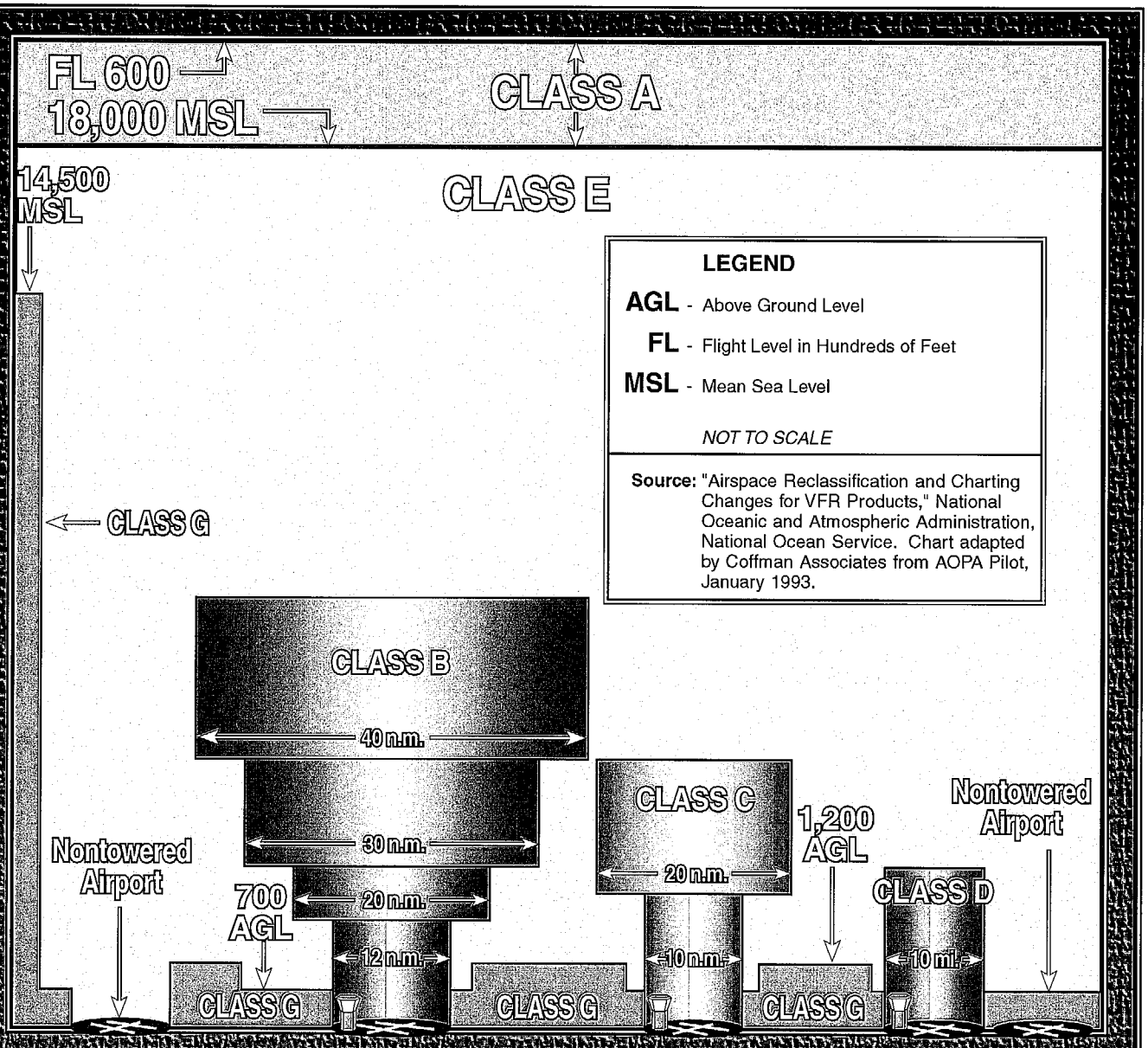
Traffic patterns at Laughlin/Bullhead International Airport are all to the west. The pattern altitude is 1700 feet MSL for small general aviation, and 2200 feet MSL for high performance aircraft. There is a published instrument departure procedure for Runway 34. This involves a climbing right turn direct to the Needles VORTAC.

AIR TRAFFIC CONTROL

The FAA has established 21 Air Route Traffic Control Centers (ARTCC) throughout the continental United States to control aircraft operating under instrument flight rules (IFR) within controlled airspace and while enroute. An ARTCC assigns specific routes and altitudes along federal airways to maintain separation and orderly traffic flow. The Los Angeles ARTCC located in Palmdale, California controls IFR airspace enroute to the Laughlin/Bullhead City area.

The ARTCC delegates certain airspace to local terminal facilities which assume responsibility for the orderly flow of air traffic arriving and departing major terminals. The Laughlin/Bullhead airport traffic control tower (ATCT) is charged with the control of the Class D airspace around IFP during the tower's operating hours.

98MP18-1F-2/25/99

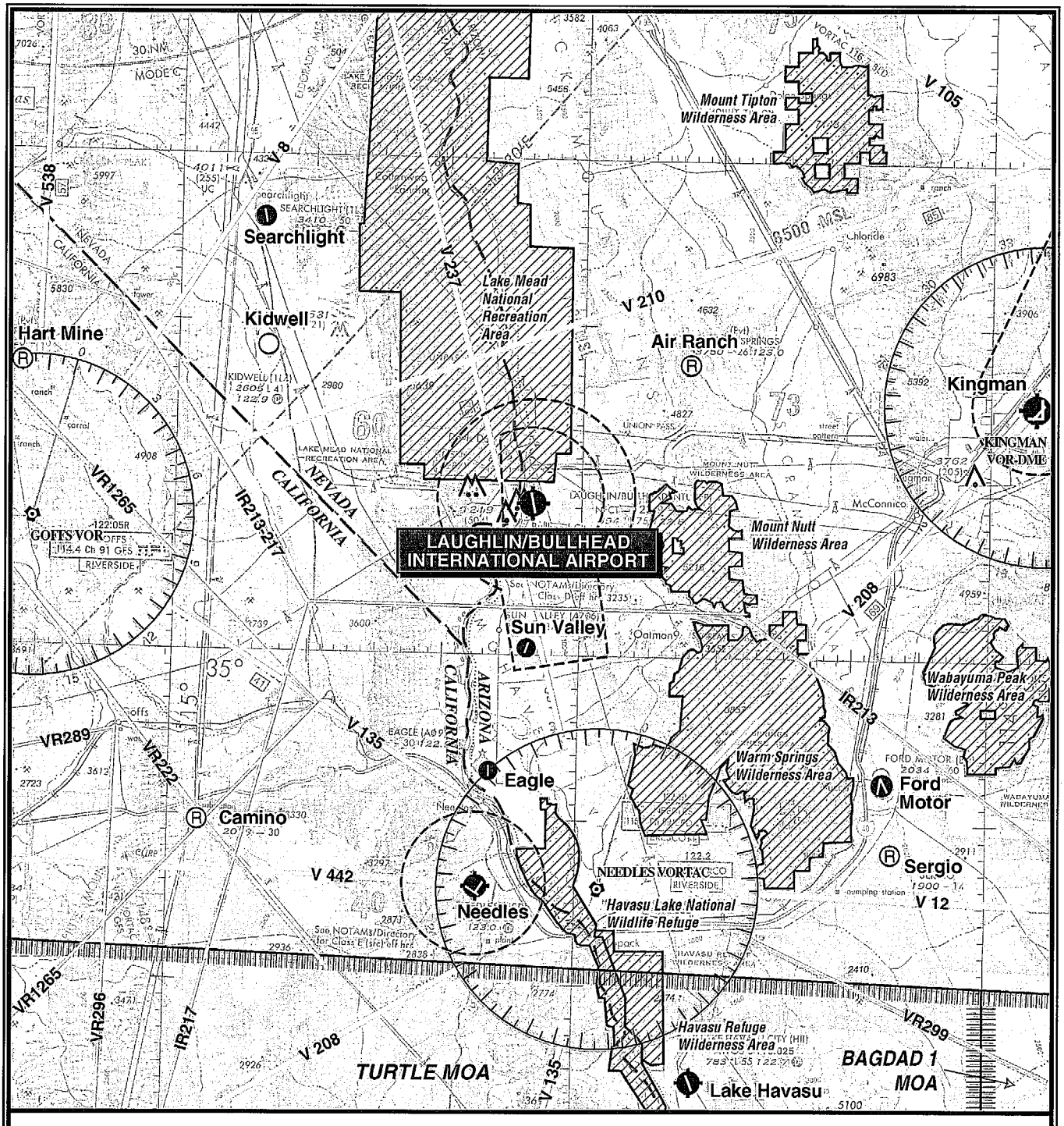


CLASSIFICATION	DEFINITION
CLASS A	Generally airspace above 18,000 feet MSL up to and including FL 600 .
CLASS B	Generally multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports.
CLASS C	Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.
CLASS D	Generally airspace from the surface to 2,500 feet AGL surrounding towered airports.
CLASS E	Generally controlled airspace that is not Class A, Class B, Class C, or Class D.
CLASS G	Generally uncontrolled airspace that is not Class A, Class B, Class C, Class D, or Class E.

LAUGHLIN BULLHEAD INTERNATIONAL Airport

Exhibit 1F
AIRSPACE CLASSIFICATION

98MP18-1G-2/25/99



LEGEND

- Airport with hard-surfaced runways 1,500 feet to 8,069 feet in length
- Airport with other than hard-surfaced runways
- Private Airport
- VORTAC
- Compass
- Obstruction Below 1000 ft. AGL
- Victor Airways
- Military Training Routes
- Class D Airspace
- Class E Airspace
- Class E Airspace with floor 700 ft. above surface
- National Park Service Areas
- Military Operations Area (MOA)

NORTH

NOT TO SCALE

LAUGHLIN BULLHEAD INTERNATIONAL Airport

Exhibit 1G
REGIONAL AIRSPACE

AREA AIRPORTS

As indicated on **Exhibit 1G**, there are several other airfields in the tri-state area. There are seven other airports in the vicinity that are open to the public, and approximately four private, restricted use airports. The four private, restricted use airports include Air Ranch to the northeast, Ford Motor Proving Grounds and Sergio to the southeast, and Camino to the southwest. The following briefly describes the seven public use airports:

Sun Valley Airport is located approximately nine nautical miles south of IFP just south of Bullhead City. It is a residential airpark with aircraft stored at the homeowners property. The airport has an asphalt runway that is not strength-rated. Runway 18-36 is 3,700 feet long and 42 feet wide. The airport has 11 based aircraft and annual operations are estimated at 23,000.

Eagle Airpark is located 16 nautical miles south of IFP near Willow Valley. The airport's single Runway 17-35 is 4,000 feet long and 40 feet wide. The north 3,000 feet of the runway is paved with asphalt, while the south 1,000 feet is dirt. There are no published instrument approaches. There are 53 aircraft based on the airport with annual operations estimated to be 52,000 annually.

Kingman Airport is located on the east side of Kingman, Arizona approximately 31 nautical miles east of IFP. The airport has two asphalt runways. Runway 3-21 is the longest at 6,831 feet and 150 feet wide with a pavement strength of 85,000 pounds DWL. Runway 21 has a published nonprecision approach. Runway 17-35 is 6,725 feet long and 75 feet wide with a strength rating of 60,000 pounds DWL. Kingman Airport is served by three daily flights by America West Express. There are 180 aircraft based at Kingman Airport and annual operations area estimated at 33,000 annually.

Lake Havasu City Airport is located approximately 37 nautical miles south of IFP on the north side of Lake Havasu City. The airport's single Runway 14-32 is 5,500 feet long and 100 feet wide. The asphalt pavement has a strength of 30,000 pounds SWL. There is no published straight-in approach to the runway, although there are two circling approaches. Lake Havasu City is served by four daily flights by America West Express. There are 184 aircraft based at the airport. Annual operations are estimated at 56,000.

Needles Airport is located on the south side of Needles, California approxi-mately 24 nautical miles south of IFP. The airport has two asphalt runways and no published instrument approaches. Runway 11-29 is 5,005 feet long and 150 feet wide, and Runway 2-20 is 4,802 feet long and 15 feet wide. Both runways are strength-rated at 32,000 pounds DWL. Needles Airport has 12 based aircraft and an estimated 11,000 annual operations.

Searchlight Airport is located south of Searchlight, Nevada approximately 23 nautical miles northwest of IFP. The airport has a single Runway 16-34 that is 5,040 feet long and 70 feet wide. The

asphalt runway has not been strength rated. There are only two based aircraft and annual operations are estimated at 300.

Kidwell Airport is located in Nevada approximately 18 miles northwest of IFP. The airport has a single dirt Runway 15-33 that is 4,140 feet long and 65 feet wide. The privately owned and operated airport is part of a small restaurant/casino/resort. There are also residential lots with access to the airfield. The airport has 14 based aircraft with operations estimated at 3,500 annually.

SURFACE TRANSPORTATION NETWORK

REGIONAL HIGHWAY SYSTEM

The Laughlin/Bullhead City area has good highway connections in all directions. A network of federal and state highways provides truck, bus, and automobile access to the area. This network was depicted earlier on **Exhibit 1A**. Arizona and Nevada State Highways provide direct access to Laughlin and Bullhead City. Arizona State Route (SR) 95 begins next to the airport, runs south through Bullhead City, and continues south through western Arizona to the Mexican border. Arizona SR 68 also begins at the airport and runs east 24 miles to U.S. Highway 93 near Kingman, Arizona. U.S. 93 is designated at a N.A.F.T.A. corridor.

On the Nevada side, State Highway 163 begins at the Laughlin Bridge and runs west on the north side of Laughlin to intersect with U.S. 95 near the California/Nevada border. U.S. 95 runs north-south and provides access to Las Vegas, 90 miles to the north.

The closest interstate highway is Interstate 40. The east-west interstate can be accessed 24 miles south of Laughlin/Bullhead City near Needles, California or to the east in Kingman.

Other locally important roadways in the airport vicinity include Bullhead Parkway and Casino Drive. Bullhead Parkway is the only other major arterial in Bullhead City besides SR's 68 and 95. Beginning at the junction of SR 95 and 68 near the Laughlin Bridge and Nevada 163, Bullhead Parkway provides a bypass around the east side of Bullhead City. Casino Drive provides access from Nevada 163 to the casinos and resorts along the Colorado River in Laughlin.

PUBLIC TRANSPORTATION

There is no local public (bus) transportation system in Bullhead City. The Town of Laughlin is served by the Citizen's Area Transit (CAT), but does not extend across state lines to the airport. The casinos, however, do run shuttle buses to and from the airport. Taxi service and a dial-a-ride service available on an on-call basis.

An on-demand ferry service provides an alternative mode of transportation between Bullhead City and Laughlin. Operated 24-hours per day by the Riverside Resort and Casino, the ferry transports approximately 2,000 to 2,500

persons daily from a parking lot across SR 95 from the airport.

Regional bus service is available with Greyhound and shuttle services from the Laughlin casinos to Las Vegas. The closest Amtrak passenger rail service is available in Needles and in Kingman.

SURFACE FREIGHT

There are 24 regional/international continental motor freight carriers serving the Laughlin/Bullhead City area. Same day motor freight service is available to Phoenix, Tucson, Flagstaff, Las Vegas, Henderson, San Diego, Los Angeles, and Nogales, Mexico.

There is no rail available in Laughlin or Bullhead City. The closest rail service is 24 miles away in Needles.

COMMUNITY PROFILE

A community profile provides a general look at the socioeconomic make-up of the community that utilizes an airport. It also provides an understanding of the dynamics for growth and the potential changes that may affect aviation demand. Aviation demand forecasts are normally directly related to the population base, economic strength of the region, and the ability of the region to sustain a strong economic base over an extended period of time. Current demographic and economic information was collected from several local, state and federal sources.

POPULATION

The Laughlin/Bullhead City area is one of the faster growing areas in two of the fastest growing states in the nation. Since 1980 the area has grown at a rate of 7.0 percent annually. By comparison, Mohave County has grown at 5.2 percent a year and Clark County has averaged 5.7 percent annually. **Table 1D** presents the population growth of these communities, counties, as well as the two states since 1960.

The table also includes projections for each jurisdiction. Bullhead City is projected to grow at a 2.9 percent annual rate. Mohave County is projected at an annual rate of 2.5 percent. While long range projections of population in the Town of Laughlin were not available, Clark County is projected to continue a strong growth rate of 4.1 percent.

In addition to the permanent population, the area is attractive to seasonal residents from colder climates who choose to winter in the milder southwest. These visitors typically spend three to four months in the area. **Table 1E** depicts the growth of seasonal residents in Bullhead City and Mohave County since 1980. The growth has been more significant for the County than within the corporate limits of Bullhead City. While the percentage has declined over the years, the seasonal population in Bullhead City is still equivalent to 17 percent of the permanent population.

TABLE 1D
Population Statistics

Year	Bullhead City[a]	Mohave County[a]	Arizona[a]	Laughlin[b]	Clark County[b]	Nevada[b]
1960	N/A	7,736	1,302,161	N/A	128,734	289,620
1970	4,007	25,857	1,775,399	N/A	277,230	496,960
1980	10,719	55,865	2,716,546	85	463,087	800,508
1990	21,951	93,497	3,665,228	4,791	770,280	1,237,090
1995	26,940	124,500	4,228,900	8,000	1,036,290	1,582,280
1998	28,535	138,625	4,764,025	7,870	1,255,200	1,852,650
FORECAST						
2002	32,737	157,253	5,199,151	12,320	1,529,680	2,199,160
2005	35,926	171,504	5,553,849	N/A	1,722,630	2,421,030
2010	41,899	194,403	6,145,108	N/A	2,031,500	2,783,700
2020	53,848	236,396	7,363,604	N/A	N/A	N/A

[a] Arizona Department of Economic Security, Research Administration, Population Statistics Unit
[b] Nevada State Demographer

TABLE 1E
Seasonal Population
Bullhead City and Mohave County

Year	Bullhead City	Mohave County
ACTUAL		
1980	4,002	8,544
1990	4,412	13,596
1995	4,632	18,321
PROJECTED		
2000	4,863	22,378
2005	5,106	25,811
2010	5,361	28,762

Source: Bullhead City General Plan Update

While the local population grew in the 1980's, it also got younger. The median age of Bullhead City's residents declined from 47.5 years in the 1980 census to 42.1 years in the 1990 census. This occurred despite the fact that the median age in Mohave County and Arizona increased over the same period. This shift was primarily due to an increase in the population in the prime working age range of 25 to 54, which grew from 32 percent in 1980 to 40

percent in 1990. The **Bullhead City General Plan Update** has anticipated that the 2000 census will reflect an even younger population as sustained employment growth will continue to attract younger residents.

EMPLOYMENT

The growing percentage of working age persons in the area has understandably resulted in a labor force growth rate that has been faster than that of the population. **Table 1F** presents the growth in the labor force and employment of Bullhead City residents since 1980. In 1980, the labor force was just 35 percent of the population. By 1990, this percentage had grown to 54 percent. In 1997, the labor force was 56 percent of the population of Bullhead City. Unemployment in the Bullhead City has fluctuated between five and eight percent since 1980.

TABLE 1F
Labor Force Statistics
Bullhead City

	1980	1990	1995	1996	1997
Civilian Labor Force	3,800	11,863	15,816	16,401	15,872
Employed	3,500	11,214	14,760	15,218	14,963
Unemployed	300	649	1,056	1,183	909
Unemployment Rate	7.1%	5.5%	6.7%	7.2%	5.7%

Table 1G presents employment by sector Mohave County since 1970. Services and retail trade are the largest sectors of employment in the county. Services has grown from 21 percent in 1970 to 28 percent in 1995. Retail trade has grown from 20 percent to 24 percent. Only mining has seen a decline in employment since 1970. Services and retail trade are generally sectors of employment that capitalize on tourism.

Employment in Laughlin/Bullhead City is driven primarily by the gaming industry. According to the 1990 census, over 47 percent of the employed residents in Bullhead City worked outside the state, primarily at the casinos in Laughlin. The **Bullhead City General Plan Update** indicated that there is no reason that this percentage would have changed significantly in the 1990's.

Table 1H lists the areas largest private employers. The eight largest are casino/hotels in Laughlin, seven of which employ between 1,000 and 2,000 persons each. The other listed employer is the Mohave Generating Station which also located on the west side of the river. The largest employers in Bullhead City are Bullhead Community Hospital and the Silver Ridge Village retirement home.

TABLE 1G
Mohave County Employment By Sector

	1970	1980	1990	1995	Annual % Growth
Farm	290	370	340	350	0.8%
Agricultural Services	40	130	380	470	10.4%
Mining	530	590	100	210	-3.6%
Construction	1,140	1,790	4,230	4,320	5.5%
Manufacturing	570	3,040	2,760	2,990	6.9%
Trans., Comm., Util.	400	1,020	1,550	1,990	6.6%
Wholesale Trade	140	410	850	1,190	8.9%
Retail Trade	1,890	4,640	9,010	10,640	7.2%
Finance, Ins., Real Estate	900	2,280	3,880	3,620	5.7%
Services	1,970	4,240	10,310	12,420	7.6%
Government	1,440	2,910	4,410	6,050	5.9%
Total	9,300	21,420	37,830	44,240	6.4%

Source: U.S. Department of Commerce, Regional Information System (REIS)

TABLE 1H
Major Employers
Laughlin/Bullhead City

Employer	Employees
Riverside Resort	1,980
Flamingo Hilton Laughlin	1,750
Ramada Express Hotel Casino	1,500
Harrah's Laughlin	1,440
Edgewater Hotel Casino	1,434
Colorado Belle Hotel Casino	1,404
River Palms	1,100
Pioneer Gambling Hall	729
Mohave Generating System	390

Source: Laughlin Chamber of Commerce

INCOME

Table 1J compares the per capita personal income (PCPI) for Mohave and Clark Counties, the states of Arizona and Nevada, and the United States since 1970. Mohave County has historically trailed the state of Arizona in PCPI over the years. Clark County's PCPI has been just below that of Nevada's over the same time period. Arizona and Mohave County have been below the national average, while Clark County and Nevada have been above the national PCPI.

Arizona ranked 37th and Nevada 11th among the states in PCPI in 1995. Arizona is down from 31st in 1980 and 27th in 1970. Nevada is down from 6th in both 1980 and 1970.

TOURISM AND GAMING

As indicated earlier the gaming industry has been the primary catalyst for the Laughlin/Bullhead City economy. According to a recent economic impact study performed cooperatively by the University of

Nevada and the University of Arizona, 11,029 persons were directly employed in 1997 by gaming and tourism industries in the area. The industry indirectly accounted for an additional 2,246 jobs. An estimated 4.7 million annual tourists spend more than $800 million dollars in the region.

TABLE 1J
Per Capita Income

	1970	1980	1990	1995
Mohave County	$3,725	$7,948	$14,598	$16,598
Clark County	4,825	11,079	19,551	23,812
Arizona	3,801	9,328	16,538	20,073
Nevada	4,872	11,579	20,134	24,361
United States	4,069	10,030	19,142	23,196

Source: U.S. Department of Commerce, Regional Economic Information System (REIS)

There are nine casino/hotels and one motel in Laughlin. **Table 1K** list these hotels and the number of rooms available in each. In total there are 11,064 rooms in Laughlin. Combined with over 1,800 rooms in Bullhead City, there are nearly 13,000 hotel/motel rooms in the immediate area. In addition to the casinos in Laughlin, the Fort Mojave Indian Tribe owns and operates the 350-room Avi Resort Casino in California, 11 miles south of Laughlin. There are also 21 RV parks in the area with over 2,500 sites.

TABLE 1K
Hotel Rooms
Laughlin, Nevada

Hotel	No. of Rooms
Bay Shore Inn	105
Colorado Belle Hotel and Casino	1,230
Riverside Resort Hotel and Casino	1,404
Edgewater Hotel and Casino	1,450
Flamingo Hilton Laughlin	2,000
River Palms Resort Hotel and Casino	1,003
Golden Nugget and Gambling Hall	300
Harrah's Casino Hotel Laughlin	1,658
Pioneer Hotel and Gambling Hall	414
Ramada Express Hotel and Casino	1,500
Total Rooms	11,064

Source: Laughlin, Nevada Chamber of Commerce

Table 1L presents annual gaming win revenues for Laughlin, Clark County, and Nevada since 1981. In 1981, Laughlin comprised just over one percent of the gaming win revenues in Clark County. By 1993, the Laughlin casinos had captured 11.5 percent of the Clark County market. By 1997, this market share had declined to 7.8 percent. In 1998, gaming win in Laughlin was up 1.9 percent over the previous year compared to increases of over three percent in Clark County and the rest of the state.

The Colorado River and the Lake Mead Recreation Area offer area visitors a variety of water recreation activities. Lake Mohave is the gateway to the Lake Mead Recreation Area, stretching for 67 miles from the Davis Dam to the Parker Dam. The Black Mountains east of Bullhead City provide for additional outdoor recreational activities.

TABLE 1L
Gaming Revenues
($000)

Year	Laughlin	Clark County	Nevada
1981	$19,808	$1,786,052	$2,654,400
1982	67,054	1,835,374	2,722,628
1983	80,534	1,929,261	2,892,910
1984	118,391	2,067,600	3,146,482
1985	160,587	2,276,327	3,370,619
1986	187,418	2,431,237	3,532,958
1987	242,602	2,789,899	3,982,214
1988	229,738	3,137,882	4,429,411
1989	345,971	3,428,366	4,748,536
1990	398,635	4,103,388	5,480,249
1991	463,377	4,153,017	5,569,868
1992	506,801	4,378,402	5,861,554
1993	539,822	4,727,463	6,245,799
1994	534,990	5,430,751	7,006,548
1995	515,847	5,717,566	7,366,352
1996	490,661	5,783,783	7,426,472
1997	482,255	6,152,415	7,802,702
1998	491,409	6,347,978	8,065,272

Source: Nevada Gaming Control Board

AREA LAND USE

Exhibit 1H, Generalized Existing Land Use, illustrates existing land uses in the area of Laughlin/Bullhead International Airport. The map was based on the **Bullhead City General Plan Update** and the 1996

Laughlin/Bullhead International Airport F.A.R. Part 150 Noise Compatibility Study. The land use categories shown on the map were selected to conveniently fit noise and land use compatibility planning requirements. **Table 1M** lists the land use categories shown on the existing land use map.

The majority of the existing development in Bullhead City is located in the southwestern corner of the study area, near the bend in the Colorado River. Development has, however, occurred all along the Colorado River ("Original" Bullhead and Davis Camp) and to the north and east of the airport (Pegasus Ranch and Lake Mohave Highlands). There is also development south of the airport, along Silver Creek Road. This area includes both a hospital and a nursing home, in addition to residential land uses.

TABLE 1M
Existing Land Use Categories Illustrated on Generalized Existing Land Use Exhibit

Category	Generalized Land Uses
Single-family Residential	Single-family homes.
Multi-family Residential	Duplexes, townhouses, apartments, and condominium buildings.
Residential Park	Parking area for park models, recreational vehicles, and travel trailers.
Casino/Resort	Resorts, hotels, motels, time-share units, and related facilities.
Commercial	Businesses, offices, and warehousing.
Industrial, Transportation, Utilities	Manufacturing, utilities, and transportation.
Public/Semi-Public	Government uses and semi-public institutions. Includes noise-sensitive institutions such as places of worship, schools, nursing homes, hospitals, community centers, and residential group quarters.
Parks and Open Space	Parks, golf courses, cemeteries, ponds, washes, and nature preserves.
Undeveloped	Vacant (cleared) lots and undeveloped desert.

The majority of housing in Bullhead City is comprised of detached, single-family homes. There are, however, also manufactured (mobile) home parks, multi-family housing complexes, and recreational vehicle parks. These are illustrated on **Exhibit 1H**, as Residential Parks.

Two recreational vehicle parks are located immediately north of the airport: Ridgeview RV Resort, located on the north side of Bullhead Parkway, across from the entrance to the airport's commercial service terminal area, and Davis Camp, located off of SR 95, adjacent to the Colorado River. A third, the Carefree Trailer Park, is located in "Original" Bullhead. Multi-family housing developments are becoming more common in the area. These developments occur both north and south of the airport facility. Manufactured homes are scattered throughout Bullhead City, particularly in the vicinity of the airport.

The nearest school to the airport is Mountain View Elementary School, located just west of the southern runway end, in "Original" Bullhead. The only other school within the study area is Mohave High School located off of SR 95 at Hancock Road.

Laughlin's portion of the study area is primarily comprised of the casino area and the Mohave Generating Station. As indicated earlier, there are over 11,000 hotel rooms in Laughlin.

The State of Arizona also regulates the disclosure of aviation activities to prospective buyers of real estate. In 1997, the state adopted legislation allowing airport sponsors to identify Airport Influence Areas (AIA) around public and commercial use airports.

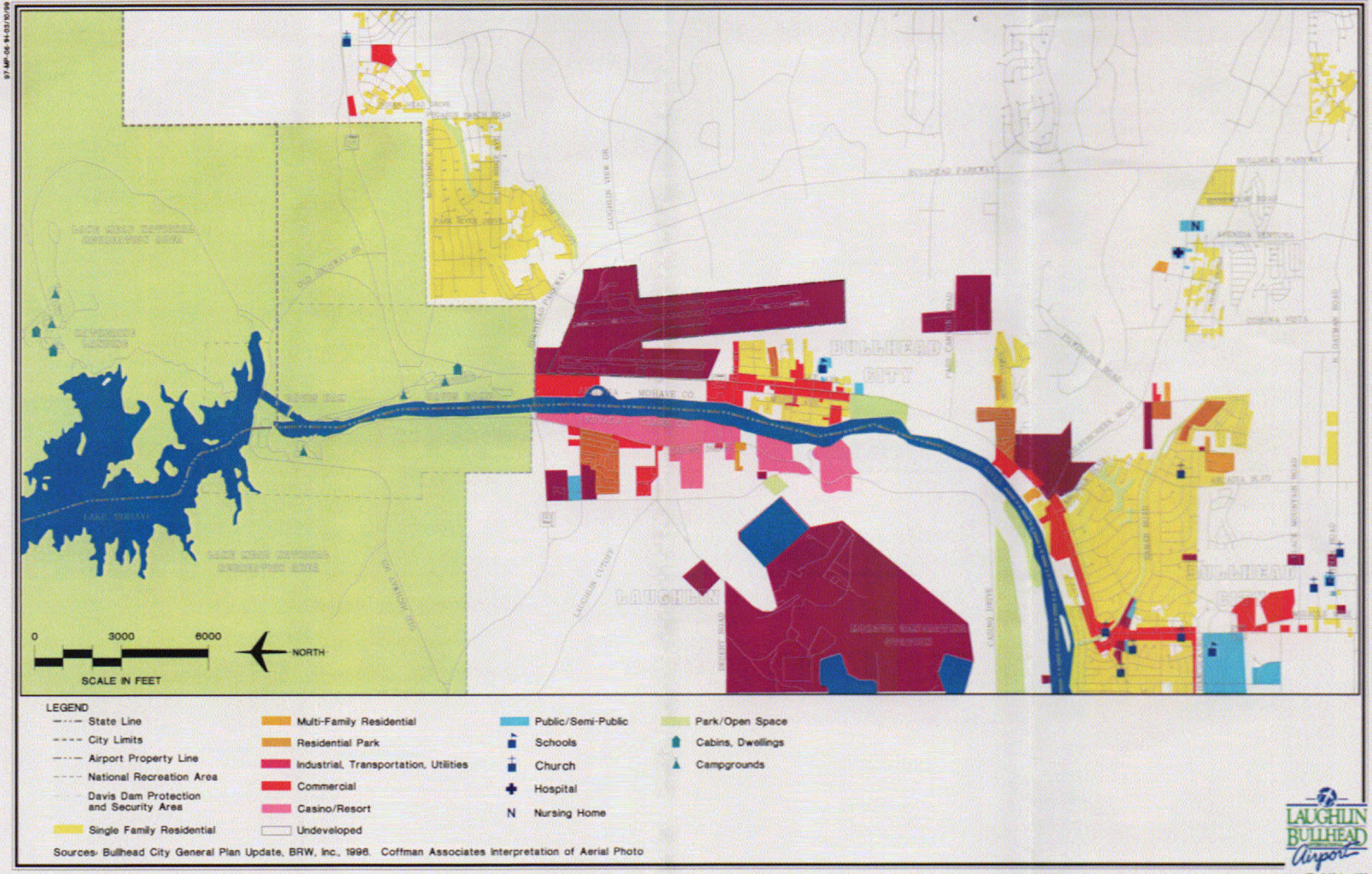
In 1999, Arizona Revised Statute § 28-8464 (Public Airport Disclosure) was added requiring the disclosure of public use airports to prospective purchasers of real estate within the airport "vicinity" ("Vicinity" is defined as the area within the 60 DNL contour and/or traffic pattern airspace.) Under this law, a map will be made available upon request to prospective buyers showing areas designated to be within the disclosure area. In addition, all developers of subdivisions or undivided lands must, in their public report, provide a map showing the location of the property and its proximity to area airports. If the property is determined to be within an airport's "vicinity", then this information will be provided to prospective buyers.

Exhibit 1J indicates future planned land use in the vicinity of Laughlin-Bullhead International Airport as outlined in the **Bullhead City General Plan Update**. According to the General Plan, areas immediately adjacent to the east, west, and south are planned light industrial, general industrial, or regional commercial access.

Areas further east of the airport and Bullhead Parkway are planned for residential and community commercial uses. Along Highway 95 to the west of the airport, planned uses include commercial resort and high density residential. The closest residential areas to the south in the General Plan are over two miles from the south end of the runway.

Areas to the north are anticipated to remain in national recreation area uses. Areas along the west bank of the Colorado River in Nevada will remain as casino resort uses.

97-MP-06 91-03/10/99



BULLHEAD CITY
LAUGHLIN
BULLHEAD PARKWAY
0
3000
6000
SCALE IN FEET
NORTH
LEGEND
State Line
City Limits
Airport Property Line
National Recreation Area
Davis Dam Protection and Security Area
Single Family Residential
Multi-Family Residential
Residential Park
Industrial, Transportation, Utilities
Commercial
Casino/Resort
Undeveloped
Public/Semi-Public
Schools
Church
Hospital
Nursing Home
Park/Open Space
Cabins, Dwellings
Campgrounds
Sources: Bullhead City General Plan Update, BRW, Inc., 1996. Coffman Associates Interpretation of Aerial Photo

LAUGHLIN BULLHEAD Airport

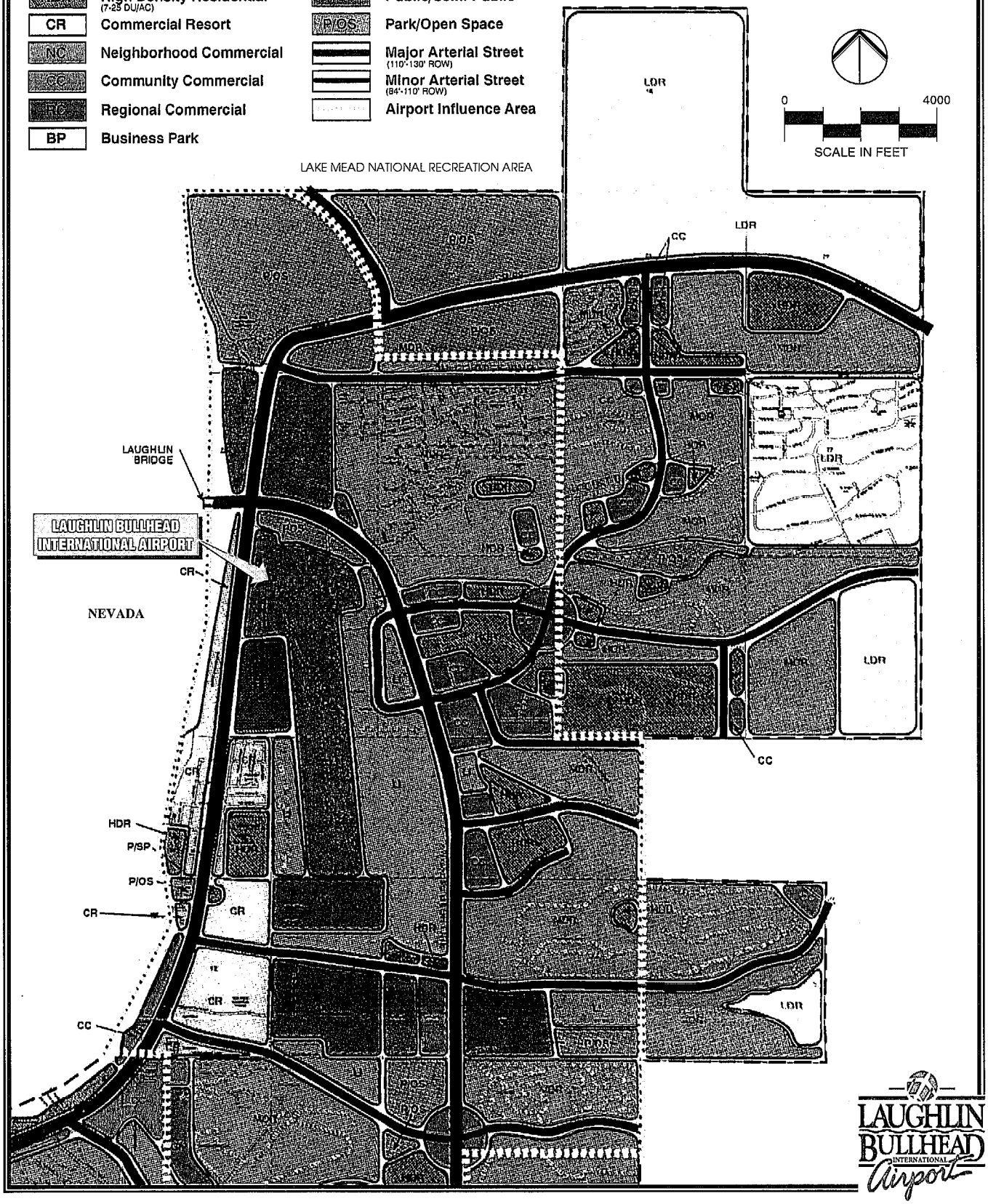
Exhibit 1H
GENERALIZED EXISTING LAND USE

98MP18-1J-10/4/00

Land Use Plan

- LDR — Low Density Residential (0-5 DU/AC)
- MDR — Medium Density Residential (3-10 DU/AC)
- HDR — High Density Residential (7-25 DU/AC)
- CR — Commercial Resort
- NC — Neighborhood Commercial
- CC — Community Commercial
- RC — Regional Commercial
- BP — Business Park
- LI — Light Industrial
- GI — General Industrial
- P/SP — Public/Semi-Public
- P/OS — Park/Open Space
- Major Arterial Street (110'-130' ROW)
- Minor Arterial Street (84'-110' ROW)
- Airport Influence Area

Source: Bullhead City General Plan Update, BRW, Inc., June 1996.



LAUGHLIN BULLHEAD INTERNATIONAL Airport

Exhibit 1J
FUTURE LAND USES

DOCUMENT SOURCES

A variety of different documents were referenced in the inventory process. The following listing reflects a partial compilation of these sources. The listing does not include the data provided directly by the Mohave County Airport Authority staff or airport drawings which were referenced for information. An on-site inventory was also conducted to review the existing facilities for the master planning effort.

Airport Facility Directory, Southwest United States; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, January 28, 1999 Edition.

Airport Master Plan - Laughlin/Bullhead City Airport; Mohave County Airport Authority, Coffman Associates, December, 1994

Bullhead City General Plan Update; City of Bullhead City, BRW, Inc., No Date Listed.

F.A.R. Part 150 Noise Compatibility Study - Noise Exposure Maps - Laughlin/Bullhead International Airport; Mohave County Airport Authority, Coffman Associates, April, 1996.

F.A.R. Part 150 Noise Compatibility Study - Noise Compatibility Program - Laughlin/Bullhead International Airport; Mohave County Airport Authority, Coffman Associates, October, 1996

Phoenix Sectional Aeronautical Chart; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, November 5, 1998.

Regional Economic Information System; U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Measurement Division.

U.S. Terminal Procedures, Southwest, Volume 1 of 2; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, January 28, 1999 Edition.

The following Web pages were also visited for information during the preparation of the inventory:

www.airnav.com
www.bullheadcity.com
www.state.az.us.com/commerce
www.laughlinchamber.com
www.unlv.edu/Research_Centers